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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/373,333	08/12/1999	VENKITESWARAN SUBRAMANIAN	0113.410US	2490

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EXAMINER

JOHANNSEN, DIANA B

ART UNIT	PAPER NUMBER
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1634

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DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/373,333

Applicant(s)

SUBRAMANIAN ET AL.

Examiner

Diana B. Johannsen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) 4,6-8,11,14-16,18-20,22-24,28,30 and 32-67 is/are pending in the application.
- 4a) Of the above claim(s) 38-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 4,6-8,11,14-16,18-20,22-24,28,30,32-37 and 61-67 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10,31.
- 4) ☒ Interview Summary (PTO-413) Paper No(s). 28.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

***FINAL REJECTION***

1. This action is in response to paper no. 30 filed July 2, 2002. Claims 4 and 65 have been amended. Claims 4, 6-8, 11, 14-16, 18-20, 22-24, 28, 30, 32-37 and 61-67 are now under consideration. The amendments and arguments have been thoroughly reviewed, but are not persuasive for the reasons that follow. Any rejections not reiterated in this action have been withdrawn as being obviated by the amendment of the claims. **This action is FINAL.**

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Election/Restriction***

3. It is again noted that claims 38-60 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 16.

***Information Disclosure Statement***

4. The information disclosure statement filed October 31, 2002, paper no. 31, fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Specifically, it is noted that Applicants have not provided copies of several of the foreign patents cited on the form 1449 filed October 31, 2002 (see the signed and initialed copy of the 1449 provided herewith). Those foreign patents of which copies were not provided by Applicants have not been considered by the examiner.

***Claim Rejections - 35 USC § 112, first paragraph***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**THE FOLLOWING ARE NEW GROUNDS OF REJECTION NECESSITATED BY**

**APPLICANTS AMENDMENTS TO THE CLAIMS:**

6. Claims 4, 6-8, 11, 14-16, 18-20, 22-24, 28, 30, 32-37 and 61-67 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 4 has been amended such that the instant claims are drawn to methods in which a "plurality of nucleic acid segments" derived from variant forms of a gene encoding a UDP-N-acetylglucosamine enolpyruvyltransferase (EPT) are recombined to produce a library and in which the library is then screened to "detect a recombinant herbicide tolerance nucleic acid that encodes an herbicide tolerance polypeptide that catalyzes the conversion of phosphoenolpyruvate plus shikimate-3-phosphate to 5-enolpyruvylshikimate-3-phosphate." While the instant specification does disclose the use of DNA shuffling to produce *MurA* nucleic acids that "encode a novel EPT derivative (denoted EPTD) which catalyses enolpyruvyl transfer to S3P and retains tolerance to glyphosate," the specification does not disclose the recombination of *MurA* nucleic acids to produce a nucleic acid encoding a polypeptide having the particular properties recited in the claim (i.e., that "catalyzes the conversion of

phosphoenolpyruvate plus shikimate-3-phosphate to 5-enolpyruvylshikimate-3-phosphate"). Accordingly, the specification does not provide basis for the methods of the instant claims.

***Claim Rejections - 35 USC § 112, second paragraph***

**THE FOLLOWING ARE NEW GROUNDS OF REJECTION NECESSITATED BY  
APPLICANTS AMENDMENTS TO THE CLAIMS:**

7. Claims 4, 6-8, 11, 14-16, 18-20, 22-24, 28, 30, 32-37 and 61-67 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4, 6-8, 11, 14-16, 18-20, 22-24, 28, 30, 32-37 and 61-67 are indefinite over the recitation of the limitation "the recombinant herbicide tolerance nucleic acid that encodes an herbicide tolerance polypeptide having EPSP synthase activity" in claim 4. There is insufficient antecedent basis for this limitation in the claims.

***Claim Rejections - 35 USC § 103***

8. In view of the amendment of claim 4 to require a step of "screening the library to detect a recombinant herbicide tolerance nucleic acid that encodes an herbicide tolerance polypeptide that catalyzes the conversion of phosphoenolpyruvate plus shikimate-3-phosphate to 5-enolpyruvylshikimate-3-phosphate", the following rejections are withdrawn:

a) the rejection of claims 4, 6-7, 11, 14-16, 18-20, 23-24, 28, 30, 32-33, 35-37, and 61-67 under 35 U.S.C. 103(a) as being unpatentable over Khosla et al (U.S. Patent

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No. 5,521,077 [5/1996]) in view of Subramanian et al (J. Industrial Microbiol. & Biotechnol. 19:344-349 [1997]) and Sack et al (J. Structural Biology 117:73-76 [1996]);

b) the rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Khosla et al in view of Subramanian et al, Sack et al, and Krebber et al (U.S. Patent No. 5,514,548 [5/1996]);

c) the rejection of claim 22 under 35 U.S.C. 103(a) as being unpatentable over Khosla et al in view of Subramanian et al, Sack et al, and Padgett et al (Herbicide-Resistant Crops, Duke, S.O., ed., CRC Lewis Publishers, Boca Raton, pp. 53-84 [1996]); and

d) the rejection of claim 34 under 35 U.S.C. 103(a) as being unpatentable over Khosla et al in view of Subramanian et al, Sack et al, and Aono et al (Plant Cell Physiol. 36(8):1687 [1995]).

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diana B. Johannsen whose telephone number is 703/305-0761. The examiner can normally be reached on Monday-Friday, 7:30 am-4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones can be reached at 703/308-1152. The fax phone numbers for the organization where this application or proceeding is assigned are 703/872-9306 for regular communications and 703/872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/308-0196.

Diana B. Johannsen  
January 24, 2003

  
W. Gary Jones  
Supervisory Patent Examiner  
Telephone: 703/308-1600